

10/527,910



chain nodes :  
6 7 9 10  
ring nodes :  
1 2 3 4 5 16  
chain bonds :  
1-7 5-6 6-9 7-10  
ring bonds :  
1-2 1-5 1-16 2-3 2-16 3-4 3-16 4-5 4-16 5-16  
exact/norm bonds :  
1-2 1-5 1-16 2-3 2-16 3-4 3-16 4-5 4-16 5-16 6-9 7-10  
exact bonds :  
1-7 5-6

G1:P,As,Sb

Match level :  
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:CLASS 7:CLASS 9:CLASS 10:CLASS  
16:Atom

L1 STRUCTURE UPLOADED

=> d his

(FILE 'HOME' ENTERED AT 18:21:06 ON 08 JUN 2008)

FILE 'REGISTRY' ENTERED AT 18:21:32 ON 08 JUN 2008  
L1 STRUCTURE uploaded

=> d l1  
L1 HAS NO ANSWERS  
L1 STR



G1 P,As,Sb

Structure attributes must be viewed using STN Express query preparation.

=> s l1  
SAMPLE SEARCH INITIATED 18:22:06 FILE 'REGISTRY'  
SAMPLE SCREEN SEARCH COMPLETED - 6250 TO ITERATE

32.0% PROCESSED 2000 ITERATIONS 1 ANSWERS  
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)  
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*  
BATCH \*\*COMPLETE\*\*

PROJECTED ITERATIONS: 120260 TO 129740  
PROJECTED ANSWERS: 1 TO 168

L2 1 SEA SSS SAM L1

=> s l1 full  
FULL SEARCH INITIATED 18:22:13 FILE 'REGISTRY'  
FULL SCREEN SEARCH COMPLETED - 126602 TO ITERATE

100.0% PROCESSED 126602 ITERATIONS 80 ANSWERS  
SEARCH TIME: 00.00.01

L3 80 SEA SSS FUL L1

=> fil caplus  
COST IN U.S. DOLLARS SINCE FILE TOTAL  
FULL ESTIMATED COST ENTRY SESSION  
178.36 178.57

FILE 'CAPLUS' ENTERED AT 18:22:19 ON 08 JUN 2008  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
COPYRIGHT (C) 2008 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 8 Jun 2008 VOL 148 ISS 24  
FILE LAST UPDATED: 6 Jun 2008 (20080606/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply. They are available for your review at:

<http://www.cas.org/legal/infopolicy.html>

=> s 13  
L4 10 L3  
  
=> d 1-10 bib abs

L4 ANSWER 1 OF 10 CAPLUS COPYRIGHT 2008 ACS on STN  
AN 2007:1204473 CAPLUS  
DN 147:479320  
TI Preparation of Group VIII metal phosphine complexes for use in the carbonylation of ethylenically unsaturated compounds  
IN Eastham, Graham Ronald; Tindale, Neil  
PA Lucite International UK Limited, UK  
SO PCT Int. Appl., 153pp.  
CODEN: PIXXD2

DT Patent  
LA English  
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2007119079	A1	20071025	WO 2007-GB50189	20070410
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				

PRAI GB 2006-7494 A 20060413  
OS CASREACT 147:479320; MARPAT 147:479320

AB The invention concerns metal complexes and their preparation, in particular a metal complex  $M\text{Ln}^mX^n$ , where  $M$  is a metal of Group 8, 9 or 10 and  $X$  is a halide,  $\text{HCO}_3^-$ ,  $\text{NO}_3^-$ ,  $\text{CO}_3^{2-}$  or carboxylate,  $n$  is  $\leq$  the coordination number of the metal, and  $m$  is 1 or 2 and is the oxidation state of the metal. The ligand  $L$  may be a phosphine, including a bidentate phosphine as defined by a variety of formulas and specifically named compds. The

process of the complex production comprises reacting an ammine compound of metal

M with a complexing compound, which is preferably a phosphine. The complexes are claimed as catalysts for carbonylating an ethylenically unsatd. compound. Advantages of the claimed complexes include: provides a stable catalyst metal complex without build-up of heavies during the catalytic process which would need periodic removal, no air sensitivity, and reduced catalyst preparation time.

RE.CNT 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 2 OF 10 CAPLUS COPYRIGHT 2008 ACS on STN  
AN 2007:197719 CAPLUS

DN 146:254034

TI Improved carbonylation catalyst system

IN Eastham, Graham Ronald; Tindale, Neil

PA Lucite International UK Limited, UK

SO PCT Int. Appl., 11pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2007020379	A1	20070222	WO 2006-GB2915	20060804
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JE, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW	RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
	AU 2006281291	A1	20070222	AU 2006-281291	20060804
	CA 2618574	A1	20070222	CA 2006-2618574	20060804
	KR 2008042892	A	20080515	KR 2008-706106	20080312
PRAI	GB 2005-16556	A	20050812		
	WO 2006-GB2915	W	20060804		
OS	CASREACT 146:254034; MARPAT 146:254034				
AB	A continuous carbonylation process for high turnover carbonylation, and a carbonylation reaction medium and product stream thereof. The process comprises carbonylating an ethylenically unsatd. compound with carbon monoxide in the presence of a source of hydroxyl groups and a catalyst system. The catalyst system comprising: (a) a bidentate phosphine, arsine or stibine ligand; and (b) a catalytic metal selected from a group VIB or group VIIIB metal or a compound thereof. The catalytically active concentration of said catalytic metal, measured as the ACCF (product Kg hr-1 Dm-3), is maintained at less than 0.5.				
RE.CNT 9	THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT				

L4 ANSWER 3 OF 10 CAPLUS COPYRIGHT 2008 ACS on STN  
AN 2005:962129 CAPLUS

DN 143:250073

TI Catalyst system for carbonylating ethylenically unsaturated compounds

IN Eastham, Graham; Tindale, Neil

PA Lucite International UK Limited, UK

SO PCT Int. Appl., 158 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2005079981	A1	20050901	WO 2005-GB569	20050217
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2005215229	A1	20050901	AU 2005-215229	20050217
CA 2555374	A1	20050901	CA 2005-2555374	20050217
EP 1713582	A1	20061025	EP 2005-717741	20050217
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK, IS				
CN 1972750	A	20070530	CN 2005-80011699	20050217
BR 2005007805	A	20070710	BR 2005-7805	20050217
JP 2007522934	T	20070816	JP 2006-553662	20050217
IN 2006DN04679	A	20070615	IN 2006-DN4679	20060814
KR 2007006782	A	20070111	KR 2006-719185	20060918
US 20070282124	A1	20071206	US 2007-589971	20070702
PRAI GB 2004-3592	A	20040218		
WO 2005-GB569	W	20050217		

OS MARPAT 143:250073

AB The present invention provides a catalyst system capable of catalyzing the carbonylation of an ethylenically unsatd. compound, which system is obtainable by combining: (A) a metal of Group VIB or Group VIIIB or a compound thereof, (B) a bidentate phosphine, arsine or stibine ligand, and (C) an acid, wherein the ligand is present in at least a 2:1 M excess compared to the metal or the metal in the metal compound, and that the acid is present in at least a 2:1 M excess compared to the ligand, a process for the carbonylation of an ethylenically unsatd. compound, a reaction medium, and use of the system. Thus, Me propanoate was prepared from ethylene, carbonmonoxide and methanol catalyzed by a catalyst system containing tri(dibenzylideneacetone)dipalladium ( $1.44 \times 10^{-5}$  mol), 1,2-bis-(di-tert-butylphosphinomethyl)ferrrocene ( $7.61 \times 10^{-5}$  mol) and methanesulfonic acid ( $2.30 \times 10^{-3}$  mol).

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 4 OF 10 CAPLUS COPYRIGHT 2008 ACS on STN

AN 2005:74531 CAPLUS

DN 142:316919

TI Chiral ferrocenyl diphosphines for asymmetric transfer hydrogenation of acetophenone

AU Cabou, Jerome; Brocard, Jacques; Pelinski, Lydie

CS Laboratoire de Catalyse de Lille, Catalyse Asymetrique et Polymerisation, UMR CNRS 8010, ENSCL, Villeneuve d'Ascq, 59 652, Fr.

SO Tetrahedron Letters (2005), 46(7), 1185-1188

CODEN: TELEAY; ISSN: 0040-4039

PB Elsevier B.V.

DT Journal

LA English

OS CASREACT 142:316919  
AB The synthesis of optically pure ferrocenyl diphosphines have been realized from (R)-(+)-N,N-dimethylaminoethylferrocene. Particularly, dissym. ferrocenyl diphosphines have been synthesized. The diphosphines have been used as ligands in asym. transfer hydrogenation of acetophenone in the presence of Ru catalysts.

RE.CNT 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 5 OF 10 CAPLUS COPYRIGHT 2008 ACS on STN  
AN 2004:733658 CAPLUS  
DN 142:219391  
TI Ferrocenylmethylphosphines ligands in the palladium-catalysed synthesis of methyl propionate  
AU Butler, Ian R.; Baker, Paul K.; Eastham, Graham R.; Fortune, Kevin M.; Horton, Peter N.; Hursthouse, Michael B.  
CS Department of Chemistry, University of Wales, Gwynedd, LL57 2UW, UK  
SO Inorganic Chemistry Communications (2004), 7(9), 1049-1052  
CODEN: ICCOFP; ISSN: 1387-7003  
PB Elsevier B.V.  
DT Journal  
LA English  
OS CASREACT 142:219391  
AB The synthesis of a range of novel (ferrocenylmethyl)phosphine ligands is described which have direct application in the palladium-catalyzed reaction of CO, MeOH and ethene to obtain Me propionate, a key intermediate in the preparation of Me methacrylate. Thus, lithiation of CpFeC5H3CH2NNMe2 and subsequent quench with Eschenmoser's salt gave 50% 1,2-(Me2NC2)2C5H3FeCp (1), the structure of which was determined by x-ray crystallog. Refluxing 1 with secondary phosphines HPR2 (R = CMe3, 1-adamantyl; HPR2 = 1,3,5,7-tetramethyl-2,4,8-trioxa-6-phosphaadamantane) in HOAc gave 1,2-(R2PCH2)2C5H3FeCp (3a-c, resp.); 3a was obtained in 83% yield and its structure was determined by x-ray crystallog. Hydroxymethyl analog 1,2-[(-HOCH2)2PCH2]2C5H3FeCp (6) was obtained by quaternization of 1 with MeI and subsequent reaction with P(CH2OH)3 and structurally characterized. When these ligands were used in the palladium-catalyzed preparation of Me propionate, typical turnover nos. of 59,000-64,000 were observed

RE.CNT 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 6 OF 10 CAPLUS COPYRIGHT 2008 ACS on STN  
AN 2004:539457 CAPLUS  
DN 141:350241  
TI The first 1,2,3-tris(phosphinomethyl)ferrocene  
AU Butler, Ian R.; Horton, Peter N.; Fortune, Kevin M.; Morris, Kevin; Greenwell, Christopher H.; Eastham, Graham R.; Hursthouse, Michael B.  
CS Department of Chemistry, University of Wales, Gwynedd, Bangor, LL57 2UW, UK  
SO Inorganic Chemistry Communications (2004), 7(7), 923-928  
CODEN: ICCOFP; ISSN: 1387-7003  
PB Elsevier Science B.V.  
DT Journal  
LA English  
OS CASREACT 141:350241  
AB The synthesis of the first 1,2,3-tris(phosphinomethyl)ferrocene is reported using [(dimethylamino)methyl]ferrocenes as useful intermediates. Lithiation of 1,2-bis[(dimethylamino)methyl]ferrocene with subsequent quenching with paraformaldehyde or Eschenmoser's salt afforded 2,3-bis[(dimethylamino)methyl]-1-ferrocenemethanol (9) or 1,2,3-tris[(dimethylamino)methyl]ferrocene (3), resp. Phosphination of 9 by di-tert-butylphosphine in refluxing AcOH gave the title compound,

1,2,3-tris(di-*tert*-butylphosphinomethyl)ferrocene (8) in 31% yield.  
Triamine 3 also gave the triphosphine 8 under the same reaction  
conditions. The crystal structure of 8 is reported.

RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 7 OF 10 CAPLUS COPYRIGHT 2008 ACS on STN  
AN 2004:490809 CAPLUS

DN 141:54780

TI Carbonylation of vinyl acetate and catalyst  
IN Eastham, Graham Ronald; Rucklidge, Adam John; Cole-Hamilton, David  
PA Lucite International UK Limited, UK  
SO PCT Int. Appl., 48 PP.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 4

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004050599	A1	20040617	WO 2003-GB4679	20031031
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	AU 2003278375	A1	20040623	AU 2003-278375	20031031
EP	1565425	A1	20050824	EP 2003-769682	20031031
EP	1565425	B1	20080220		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
	CN 1720217	A	20060111	CN 2003-80104652	20031031
	JP 2006508162	T	20060309	JP 2004-556464	20031031
	AT 386713	T	20080315	AT 2003-769682	20031031
	ZA 2005003932	A	20060830	ZA 2005-3932	20050516
	US 20060128985	A1	20060615	US 2005-536801	20051209
PRAI	GB 2002-28018	A	20021130		
	WO 2003-GB4679	W	20031031		

OS MARPAT 141:54780

AB The title carbonylation of vinyl acetate (I) comprises reacting I with CO in the presence of a source of hydroxyl groups and of a catalyst system, the catalyst system obtained by combining (c) a Group VIIIB metal or a compound, and (d) a bidentate phosphine ligand, to produce a lactate ester or acid of MeCH(OH)C(:O)OR, where R = H, or a C1-30-alkyl or aryl moiety which may be substituted or unsubstituted and either branched or linear or 3-hydroxy propanoate ester or acid of CH<sub>2</sub>(OH)CH<sub>2</sub>C(O)OR. In an O free (<10 ppm O<sub>2</sub>) environment Pd<sub>2</sub>(dba)<sub>3</sub> (0.04 mmoles Pd) and 1,2-bis(di-*tert*-butylphosphinomethyl)benzene (0.24 mmoles) under N atmospheric, then 300 mL degassed MeOH was added, and the solution was allowed to stir for 1 h, methanesulfonic acid (0.24 mmoles) along with 0.34 g polyvinylpyrrolidone dispersant and 75 mL vinyl acetate (VAM) were added. The reaction mixture was heated to 85°, and 10 bar of CO was added causing the temperature to increase to 100°, where it was held, and the solution allowed to react for 3 h, where both the linear and branched products (methyl-2-acetoxy propanoate and methyl-3-acetoxy propanoate) were produced.

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 8 OF 10 CAPLUS COPYRIGHT 2008 ACS on STN  
AN 2004:252417 CAPLUS

DN 140:289189

TI A catalyst system suitable for carbonylating ethylenically unsaturated compounds

IN Eastham, Graham

PA Lucite International UK Limited, UK

SO PCT Int. Appl., 116 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 4

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004024322	A2	20040325	WO 2003-GB3936	20030910
	WO 2004024322	A3	20040506		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW  
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

WO 2004014552 A1 20040219 WO 2003-GB3419 20030806

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

CA 2498293 A1 20040325 CA 2003-2498293 20030910

AU 2003269119 A1 20040430 AU 2003-269119 20030910

EP 1554039 A2 20050720 EP 2003-750901 20030910

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK

BR 2003014241 A 20050726 BR 2003-14241 20030910

JP 2005538185 T 20051215 JP 2004-571918 20030910

IN 2005DN00778 A 20070202 IN 2005-DN778 20050228

ZA 2005001775 A 20050908 ZA 2005-1775 20050301

US 20060252935 A1 20061109 US 2005-527910 20050824

PRAI GB 2002-21093 A 20020912 20030910

GB 2002-28018 A 20021130

GB 2003-9812 A 20030430

GB 2003-16159 A 20030710

WO 2003-GB3419 A 20030806

GB 2002-18613 A 20020810

WO 2003-GB3936 W 20030910

OS MARPAT 140:289189

AB The catalyst comprises a Group VIIIB metal or compound thereof and a metallocene. The carbonylation of ethylenically unsatd. compds. using carbon monoxide in the presence of a catalyst system and an alc. or water to yield the corresponding ester or carboxylic acid, resp. An example of the metallocene is 1,2-bis(dimethylaminomethyl)ferrocene.

L4 ANSWER 9 OF 10 CAPLUS COPYRIGHT 2008 ACS on STN

AN 2002:565880 CAPLUS  
DN 138:39371  
TI 'User-friendly' primary phosphines and an arsine: synthesis and characterization of new air-stable ligands incorporating the ferrocenyl group  
AU Henderson, William; Alley, Steven R.  
CS Department of Chemistry, University of Waikato, Hamilton, 3105, N. Z.  
SO Journal of Organometallic Chemistry (2002), 656(1-2), 120-128  
CODEN: JORCAI; ISSN: 0022-328X  
PB Elsevier Science B.V.  
DT Journal  
LA English  
OS CASREACT 138:39371  
AB Reaction of  $\text{FcCH}_2\text{CH}_2\text{P}(\text{O})(\text{OH})_2$  or  $\text{FcCH}_2\text{P}(\text{O})(\text{OH})(\text{OEt})$  [ $\text{Fc} = \text{Fe}(\eta^5\text{-C}_5\text{H}_4)(\eta^5\text{-C}_5\text{H}_5)$ ] with excess  $\text{CH}_2\text{N}_2$  followed by reduction with  $\text{Me}_3\text{SiCl-LiAlH}_4$  gives the air-stable primary phosphines  $\text{FcCH}_2\text{CH}_2\text{PH}_2$  and the previously reported analog  $\text{FcCH}_2\text{PH}_2$  in high yields. Reduction of  $1,1'\text{-Fc}'[\text{CH}_2\text{P}(\text{O})(\text{OEt})_2]$  [ $\text{Fc}' = \text{Fe}(\eta^5\text{-C}_5\text{H}_4)_2$ ] and  $1,2\text{-Fc}'[\text{CH}_2\text{P}(\text{O})(\text{OEt})_2]$  [ $\text{Fc}' = \text{Fe}(\eta^5\text{-C}_5\text{H}_5)(\eta^5\text{-C}_5\text{H}_3)$ ] similarly gives the new primary phosphines  $1,1'\text{-Fc}'(\text{CH}_2\text{PH}_2)_2$  and  $1,2\text{-Fc}'(\text{CH}_2\text{PH}_2)_2$ , resp. The arsine  $\text{FcCH}_2\text{CH}_2\text{AsH}_2$ , which is also air-stable, has been prepared by reduction of the arsonic acid  $\text{FcCH}_2\text{CH}_2\text{As}(\text{O})(\text{OH})_2$  using  $\text{Zn/HCl}$ . An x-ray structure has been carried out on the arsine, which is only the second structure determination of a free primary arsine. The molybdenum carbonyl complex  $[1,2\text{-Fc}''(\text{CH}_2\text{PH}_2)_2\text{Mo}(\text{CO})_4]$  was prepared by reaction of the phosphine with  $[\text{Mo}(\text{CO})_4(\text{pip})_2]$  ( $\text{pip} = \text{piperidine}$ ), and characterized by a preliminary x-ray structure determination. However, the same reaction of  $1,1'\text{-Fc}'(\text{CH}_2\text{PH}_2)_2$  with  $[\text{Mo}(\text{CO})_4(\text{pip})_2]$  gave  $[1,1'\text{-Fc}'(\text{CH}_2\text{PH}_2)_2\text{Mo}(\text{CO})_4]$  and the dimer  $[1,1'\text{-Fc}'(\text{CH}_2\text{PH}_2)_2\text{Mo}(\text{CO})_4]^2$ , characterized by electrospray mass spectrometry.  $1,1'\text{-Fc}'(\text{CH}_2\text{PH}_2)_2\text{Mo}(\text{CO})_5$  and  $1,2\text{-Fc}''[\text{CH}_2\text{PH}_2\text{Mo}(\text{CO})_5]^2$  were likewise prepared from the phosphines and excess  $[\text{Mo}(\text{CO})_5(\text{THF})]$ .  
RE.CNT 43 THERE ARE 43 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 10 OF 10 CAPLUS COPYRIGHT 2008 ACS on STN  
AN 2000:609611 CAPLUS  
DN 133:281882  
TI Diastereoselective 1,2-addition of organometallic reagents to chiral formylferrocenes leading to enantiomerically pure ferrocenyl amino alcohols: application to asymmetric dialkylzinc addition to aldehydes and synthesis of optically active 1,2-homodisubstituted ferrocenes  
AU Fukuzawa, Shin-Ichi; Tsuchiya, Daisuke; Sasamoto, Kae; Hirano, Kohki; Ohtaguchi, Makoto  
CS Department of Chemistry and Applied Chemistry, Institute of Science and Engineering, Chuo University, Tokyo, 112-8551, Japan  
SO European Journal of Organic Chemistry (2000), (16), 2877-2883  
CODEN: EJOCFK; ISSN: 1434-193X  
PB Wiley-VCH Verlag GmbH  
DT Journal  
LA English  
OS CASREACT 133:281882  
AB Chiral formylferrocenes were readily prepared in good yields by ortho-lithiation of the TMS-blocked or unblocked aminoferrocenes and subsequent reaction with DMF. The stereochem. of the reaction of  $1-[1-(S)\text{-dimethylaminoethyl}-2(\text{R})\text{-formyl}]\text{ferrocene}$  (I) with organometallic reagents was examined. Reactions of I with Grignard and organolithium reagents gave the corresponding amino alc. (II) in good yields with moderate to high diastereomeric excesses (up to 99%). When a dialkylzinc was used as the nucleophile, a single diastereomer was obtained almost exclusively. This reaction may be rationalized in terms of an autocatalytic mechanism; the zinc alkoxide, generated in situ, functions

as an activator of dialkylzinc, which then adds to the formyl group. The asym. diethylzinc addition to benzaldehyde was examined by using formylferrocenes such as I, or ferrocenyl amino alcs. such as II as catalysts, especially with regard to the relationship between catalytic activity

and the chirality of the diastereomeric ferrocenes. Alkylation with I and II gave (1R)-phenyl-1-propanol in good yields with high ee values (87-91% ee). With aromatic, straight-chain, or branched aliphatic aldehydes, the stereoselective alkylation successfully gave the corresponding alcs. in good to high optical purities when I was employed as the catalyst.

RE.CNT 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=>

---Logging off of STN---

=>

Executing the logoff script...

=> LOG Y

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	31.02	209.59
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-8.00	-8.00

STN INTERNATIONAL LOGOFF AT 18:24:58 ON 08 JUN 2008